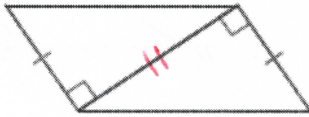


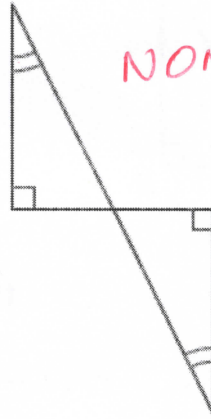
# Unit 4 WORKSHEET 8 (HL)

Decide if the following triangles are congruent by SSS, SAS, ASA, AAS, HL or NONE.

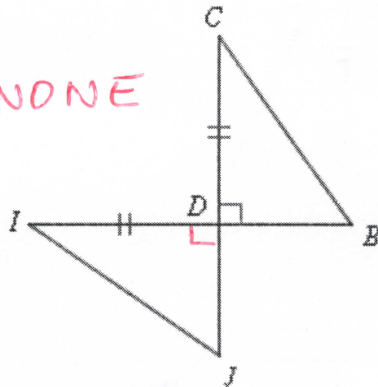
1. **SAS**



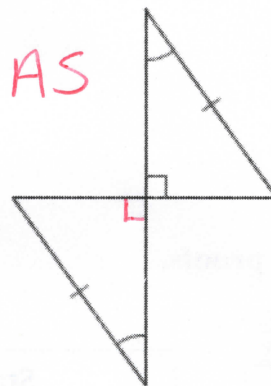
2. **NONE**



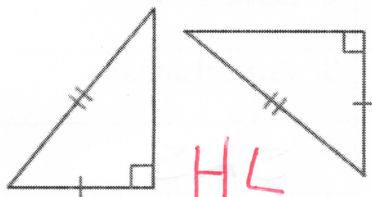
3. **NONE**



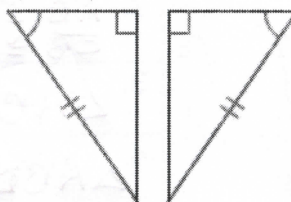
4. **AAS**



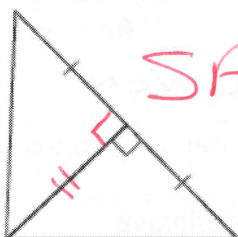
5. **HL**



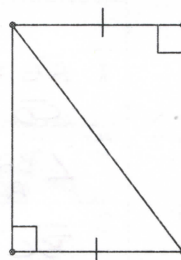
6. **AAS**



7. **SAS**

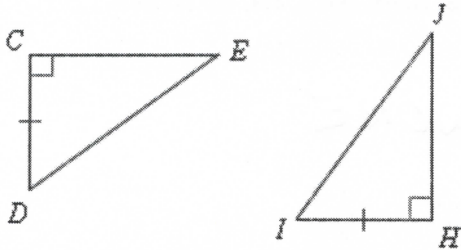


8. **HL**

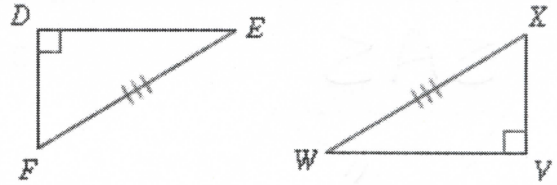


State what additional information (not what you can already assume from the picture) is required in order to know that the triangles are congruent for the reason given.

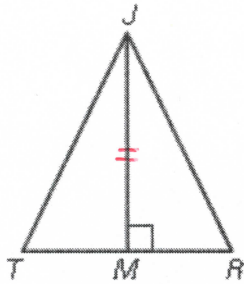
9. HL  $\overline{DE} \cong \overline{TS}$



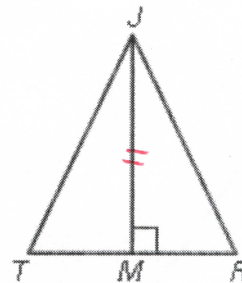
10. HL EITHER  $\overline{DE} \cong \overline{WV}$  OR  $\overline{DF} \cong \overline{XV}$



11. HL  $\overline{JT} \cong \overline{JR}$



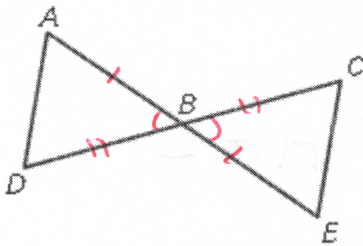
12. SAS  $\overline{TM} \cong \overline{RM}$



Fill in the blanks for the given proofs.

13. GIVEN:  $B$  is the midpoint of  $\overline{AE}$ .  
 $B$  is the midpoint of  $\overline{CD}$ .

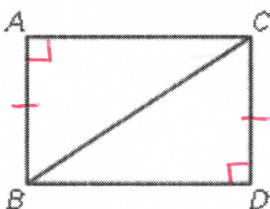
PROVE:  $\triangle ABD \cong \triangle EBC$



Statements	Reasons
1. $B$ IS MIDPOINT OF $\overline{AE}$ $B$ IS MIDPOINT OF $\overline{CD}$	1. GIVEN
2. $\overline{AB} \cong \overline{BE}$ $\overline{CB} \cong \overline{BD}$	2. def. of midpoint
3. $\angle ABD \cong \angle EBC$	3. vertical angles
4. $\triangle ABD \cong \triangle EBC$	4. SAS

14. GIVEN:  $\overline{AB} \cong \overline{DC}$ ,  $\overline{BA} \perp \overline{AC}$ ,  $\overline{CD} \perp \overline{DB}$

PROVE:  $\triangle ABC \cong \triangle DCB$



Statements	Reasons
1. $\overline{AB} \cong \overline{DC}$ , $\overline{BA} \perp \overline{AC}$ , $\overline{CD} \perp \overline{DB}$	1. GIVEN
2. $\angle BAC$ AND $\angle CDB$ ARE RIGHT $\angle$ S	2. def. of $\perp$ lines
3. $\overline{BC} \cong \overline{BC}$	3. reflexive
4. $\triangle ABC \cong \triangle DCB$	4. HL